

Upper Roanoke River PCB Study Public Meeting

July 29, 2009
DEQ Roanoke Office
7:00—9:00 p.m.

Agenda

1. Welcome and Introductions—Mary Dail, DEQ
2. Upper Roanoke River PCB Study Background—Mary Dail, DEQ
3. PCB Source Investigation, An Overview, for the Development of the Roanoke River TMDL—Mark Richards
4. PCB Model Approach and Results—Clint Boschen & Nikolai Gurdian, Tetra Tech

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NOTES: _____

UPPER ROANOKE RIVER PCB IMPAIRMENT

1972 Clean Water Act (CWA) and 1997 Water Quality Monitoring, Information, and Restoration Act (WQMIRA) require DEQ to monitor water quality and periodically assess the results. Development of Total Maximum Daily Loads, or TMDLs, for pollutants is also required by the CWA and WQMIRA. Based on DEQ fish tissue data, the Virginia Department of Health (VDH) issued a 'Health Advisory' for consumption of fish due to PCB contamination in fish tissue. The Advisory begins at the confluence of the North and South Fork Roanoke River near the gaging station at Lafayette and extends downstream to Niagara Dam. Peters Creek (beginning at the Rt. 460 crossing) and Tinker Creek (beginning at the confluence with Deer Branch near Rt. 155) are also included in the advisory. DEQ listed the Advisory area as impaired in its 303 (d)/305(b) Integrated Report which includes the Commonwealth's "Dirty Waters List."

VDH Fish Consumption Advisory states...

No more than 2 meals per month of the following fish species:

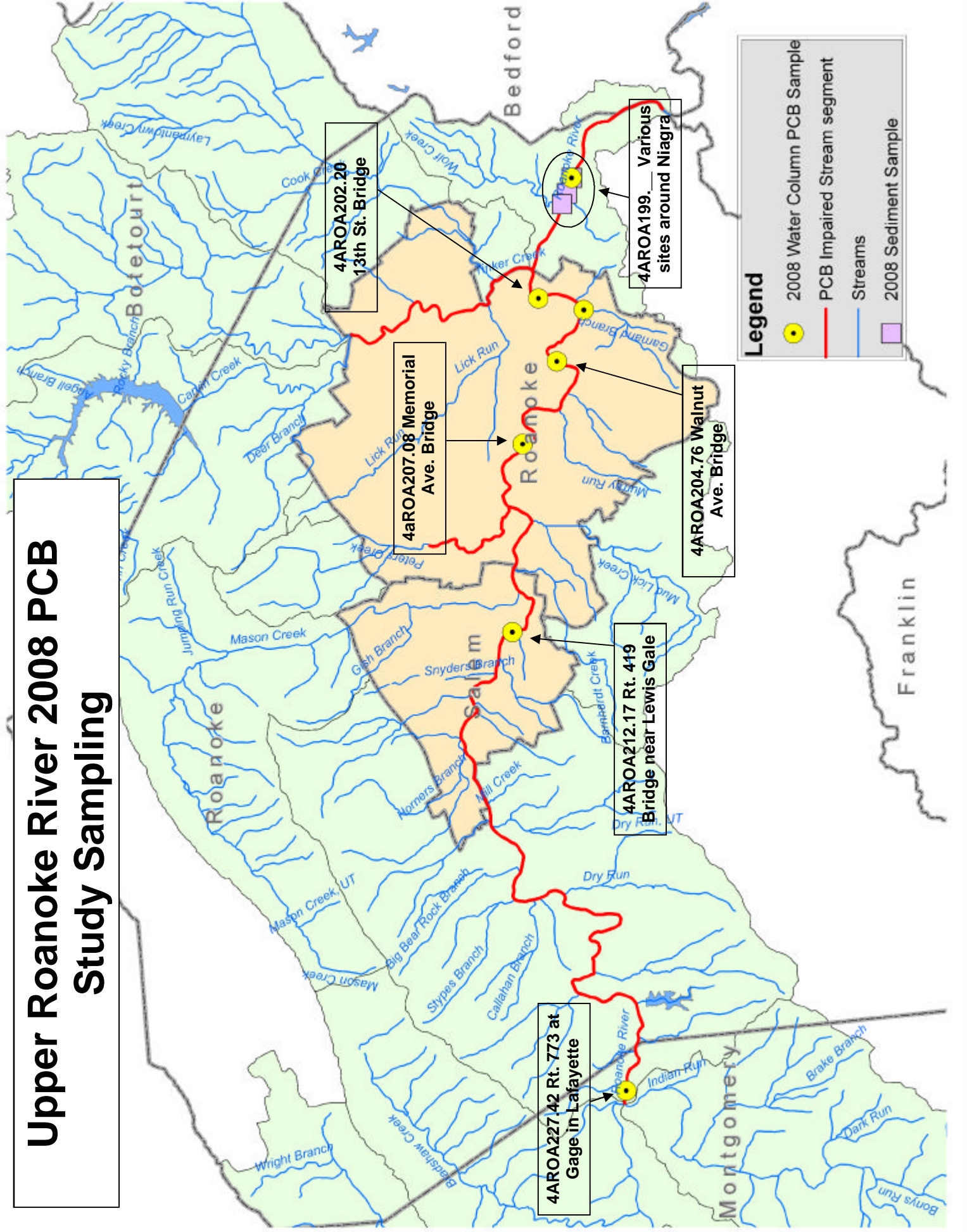
Carp, Redbreast Sunfish, Redhorse Sucker species, Smallmouth Bass, Large-mouth Bass, Rock Bass, Bluehead Chub

<http://www.vdh.virginia.gov/epidemiology/DEE/publichealthtoxicology/Advisories/index.htm>

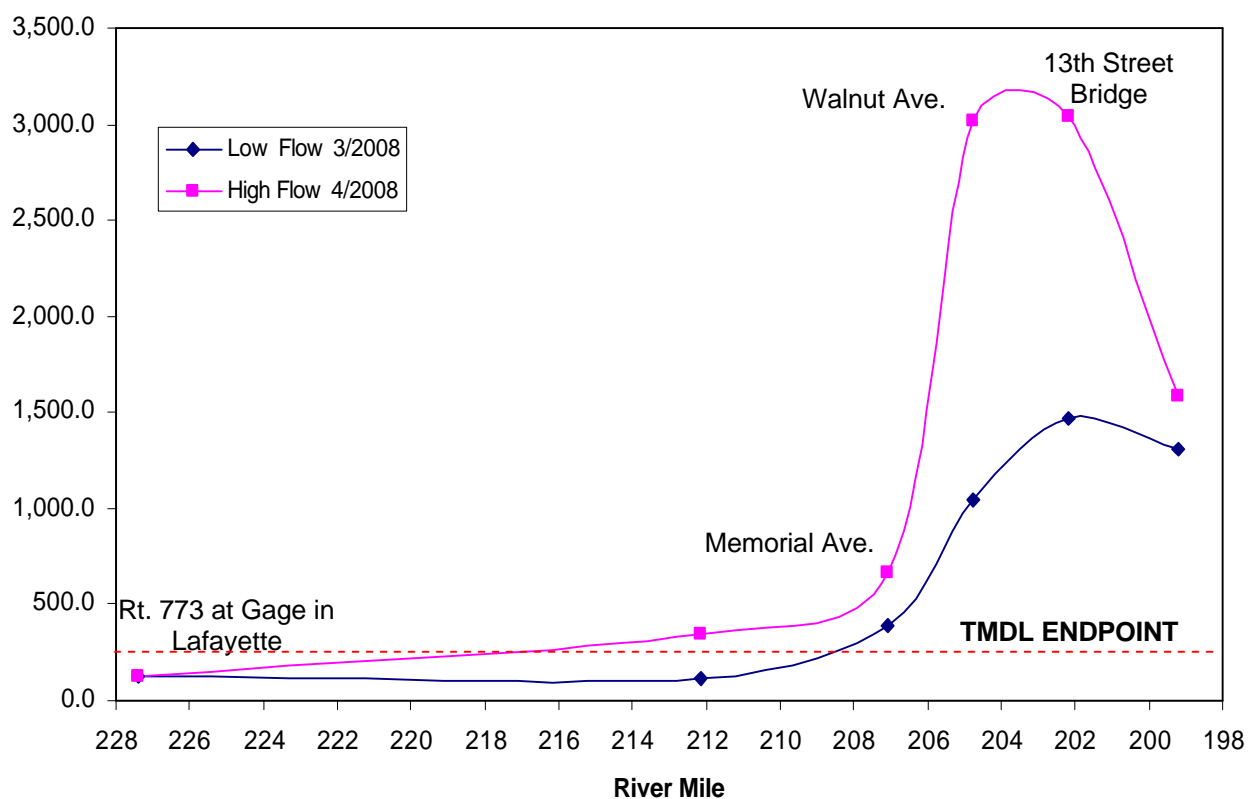
WHAT IS A TMDL?

- TMDL = Total Maximum Daily Load = Special Study
- Amount of pollution a stream can receive and still meet Water Quality Standards
- A TMDL study identifies all sources of pollution
 - **Point source pollution** is discharged from a discrete location such as a pipe, tank, pit, or ditch
 - **Non-point source pollution** originates from diffuse areas (land surface or atmosphere) having no well-defined source
- Calculate the pollutant loading entering the stream from each source, then calculate the reductions needed from each source to attain water quality standards
- EPA initiated the TMDL and contracted Tetra Tech, Inc.
- Reductions of PCBs from non-point and point sources are called for in the DRAFT TMDL Report in order to meet the TMDL and result in the removal of the fish consumption advisories.

Upper Roanoke River 2008 PCB Study Sampling



Upper Roanoke River Total PCB Congeners (pg/L) in Water Column



tPCB in sediment collected in the Roanoke River above and below Niagara Dam

